

REMARKS

Claims 1, 21, 38, 40, 47, 49, 51, 62 and 71 have been amended. Accordingly, Claims 1-11, 13, 17, 21-34, 38-43, 47-55, 57-60, 62-65 and 71-81 are pending in the application. The reconsideration of the application is respectfully requested.

Claim 62 was objected to because of an informality. Applicants have amended Claim 62 to remedy said informality. Thus, the objection to Claim 62 should be withdrawn.

Claims 21 and 62 were rejected under 35 U.S.C. Section 101. Claims 21 and 62, as amended, are believed to be within the technological arts and to produce tangible results. Specifically, Claims 21 and 62 include a rules application process adapted to parse electronic billing data. Claims 21 and 62 relate to computer technology by implementing the rules application process to extract and parse electronic billing data and a computer database for storing the transformed billing data. In addition, by parsing the electronic billing data, the invention of Claims 21 and 62 produces tangible results for storage in the computer database. In view of Applicants' amendments, the rejection of Claims 21 and 62 under Section 101 should be withdrawn.

Claims 1-11, 13, 17, 21-34, 38-43, 47-55, 57-60, 62-65 and 71-81 stand rejected under 35 U.S.C. Section 103(a) as unpatentable over Shutzer in view of Remington et al. For the sake of clarity, Claims 1-46 and 48-81 were rejected by

the Examiner. However, only Claims 1-11, 13, 17, 21-34, 38-43, 47-55, 57-60, 62-65 and 71-81 are pending in the application.

Further, the Examiner rejected Claims 30-33, which were renumbered as Claims 30-32, respectively, in Amendment C.

The Examiner rejected Claim 34, which was renumbered as Claim 33 in Amendment C.

The Examiner rejected Claims 41-43, 57, and 77, which were renumbered as Claims 40-42, 56, and 76, respectively, in Amendment C.

The Examiner rejected Claims 48, 60, and 80, which were renumbered as Claims 47, 59, and 79, respectively, in Amendment C.

Additionally, the Examiner failed to cite or provide any evidence for the anticipation, teaching, or suggestion of a translator and a common document tree which contains data and attributes which are mapped into nodes, as recited in independent Claims 38, 40, 47, 49, and 71. The Examiner also failed to cite or provide any evidence for the anticipation, teaching, or suggestion of a modularized input processing engine, as recited in independent Claims 51 and 71. Moreover, the Examiner failed to cite or provide any evidence for the anticipation, teaching, or suggestion of the step of modularizing a preprocessing of electronic billing data, as recited in independent Claim 62.

With respect to independent Claims 1, 21, 38, 40, 47, 49, 51, 62 and 71, the Examiner concedes that Schutzer does not teach the parsing/extracting functionality and cites the *abstract, figs. 5, 7-9, column 3, line 35 to column 4, line 65, and column 7, line 6 to column 8, line 50* of Remington et al. to cure this deficiency of Schutzer. The Examiner is entirely correct that Schutzer fails to teach the parsing/extractor functionality of Claims 1, 21, 38, 40, 47, 49, 51, 62 and 71. However, Applicants respectfully disagree with the Examiner's position, based on evidence presented herein, that Remington et al. teach the parsing/extractor functionality of the present invention. Furthermore, Applicants submit that neither Schutzer nor Remington et al. teach or suggest the common document model processing functionality of the present invention as recited in Claims 1, 38, 40, 47, 49, 51 and 71.

Briefly, the present invention provides an adaptive electronic bill presentment and payment (EBPP) system which provides a common document model, allowing a plurality of billers to interface with the system of the present invention to cooperatively present and accept payment of bills. The present invention uses a rules application process to generate a translator that parses the biller's data stream into a common document model tree. The data and their attributes are mapped into nodes that fit the common document model for storage in the database. The use of the common format document model and the universality of its structure allows the plurality of billers using the present

invention to maintain control, from a billing console functionality, over their billing data and how it is presented on any desired platform using any desired applications, formats and protocols. In other words, the present invention can accommodate individual data sets from, for example, both a first and second biller without mandating a particular template (for the billers to follow) for both billers. Essentially, Applicants' common model document processing functionality provides for a generic conversion process that is not confined to a particular industry, biller, or type of customer. Thus, the present invention provides for dynamic structural processing and conversion of a plurality of bill data types.

Independent Claims 1, 21, 38, 40, 47, 49, 51, 62 and 71 recite an EBBP system or method which enables a plurality of billers to interface with each other to cooperatively present and accept payment of bills using a parsing (or extracting) functionality and a common document model processing functionality. More specifically, the parsing (or extracting) functionality of Claims 1, 21, 38, 40, 47, 49, 51, 62 and 71 parses billing data using "rules of conversion" or "a rules application process" to provide dynamic structural processing and conversion for the common document model for use by the bill presentment and payment system. The rules of conversion of the present invention allows a wide variety of biller data types and formats to be operated on or parsed to fit a common document or data model which allow for the storage and processing of both data and its attributes.

As disclosed by Applicants, using "rules of conversion" allows the data to be put into a form and format where it is easier to generate and correlate the attributes for various data in a form that can be used by the common document model. Furthermore, by using a common document model format, the present invention provides a dynamic data structure. For example, not every biller data has the same information and data; each biller will have a subset of all data and attributes accommodated by the common document model and parsing/extractor functionality. Thus, the common document model and parsing functionality provides for a dynamic data structure which enables all billers to cooperatively present and accept payment of bills.

Independent Claims 38, 40, 47, 49 and 71 distinguish over Schutzer and Remington et al. by reciting a parsing (or extractor) functionality using rules of conversion which is a rules application process allowing a user to generate a translator for parsing the billing data into a common document tree in which the common document tree contains data and attributes which are mapped into nodes which fit a common model document for storage.

The creation of a translator for parsing data and attributes into a form that can be stored in a common format storage model allows the present invention to efficiently present the bill to the consumer, query the stored data, control how it will be presented (e.g., brand building); and use the stored data as a customer service tool (e.g., help desk) (see Applicants' Specification, page 10, lines 3-7). In

addition, each biller will have a subset of all data and attributes accommodated by the common document tree and parsing/extractor functionality because not every biller data has the same information and data. The parsing/extractor functionality provides a generic conversion process that is not confined to a particular industry, biller, or type of customer and accepts any subset of data from any biller.

Schutzer discloses that the bill service provider converts the bill, along with enclosures, to a standard bill definition language (see Schutzer column 14, lines 32-35). "The standard bill definition language is an extension of hypertext markup language/extended markup language that allows for combining templates with data and taking digital signatures" (see Schutzer, column 14, lines 35-38). In other words, Schutzer's standard definition format merely provides instructions for formatting the bills uniformly based on pre-determined templates. Therefore, as can be seen, Schutzer does not disclose a parsing functionality with a translator for parsing data into a common document tree with data and attributes.

Applicants also respectfully traverse the Examiner's assertion that the common document model processing functionality is anticipated by the evidence cited by the Examiner (specifically, Schutzer *figs. 1-7, and column 14, line 26 to column 15, line 2*). Schutzer discloses that the bill service provider converts the bill, along with enclosures, to a standard bill definition language that allows for combining templates with data (see Schutzer column 14, lines 32-38).

A significant difference between Schutzer and the present invention is that

Schutzer's standard definition format merely provides an instructional set of rules for formatting the bills uniformly based on pre-determined templates. On the other hand, Applicants' common document model processing functionality provides a generic conversion process that is "not confined to a particular industry, biller, or type of customer" (see Applicants' Specification, page 9, lines 3-5) and accepts any subset of data from any biller. Fundamentally, the common model processing allows the present invention to aggregate its fields of data to accommodate bills from any biller or type of customer (see Applicants' Specification, page 28, lines 9-17). For example, a first biller may require one particular subset of data while a second biller may require a similar subset data in addition to another subset of data that is substantially different from that of the first biller. Using the common model processing, the present invention can accommodate the individual data sets for both the first and second biller's without mandating a particular template for both billers. Therefore, billers retain autonomy on how they collect, group, display, and present their billing information. In short, Applicants' common document model processing functionality solves the problem associated with multiple billers having and requiring different information by accepting any subset of any data from any biller.

Remington et al. do not cure the deficiencies of Schutzer. Remington et al. does not parse billing data from a plurality of billers corresponding a plurality of

biller data types and does not convert said plurality of biller data types in to a common document model. Remington et al. disclose an EBPP remittance system enabling a biller to create bill remittance information and allowing the customer to control the payment authorization. For example, the customer specifies the amount to be paid, either partial or full (see Remington et al., *Abstract* and *Fig. 5*). This same concept is disclosed at *column 3, line 35 to column 4, line 65* of Remington et al. Then, the payment instruction and remittance information is transmitted to the biller in the biller's prescribed format. In other words, Remington et al. discloses a single biller interface that allows a single biller to specify an individual format for presentment and payment of bills. The billers bill independently of each other and each creates their own, individualized format for presentment and payment of bills. Thus, Remington et al. do not disclose or suggest a parsing functionality and a common document model that allows a plurality of billers to cooperatively present and accept payment of bills.

With respect to *column 7, line 6 to column 8, line 50* of Remington et al., Remington et al. discloses a biller software implementing static data structure (emphasis added). More particularly, the biller computer generates a bill and remittance information according to a format created by the biller. However, this bill and remittance information, referred to as bill 128 by Remington et al., is "implemented simply as a static data structure which holds pertinent data related to the account and billing matters, as well as any remittance data desired by the

biller" (Remington et al., column 7, lines 61-64). *Figs. 7-10* of Remington et al. shows details of the bill 128 (*Fig. 5* shows partial and full payment options).

As can be seen, the dynamic data structure, facilitated by the rules of conversion and provided by the common document model, as recited in Claims 1, 21, 38, 40, 47, 49, 51, 62 and 71 and the static data structure of Remington et al. are total opposite of each other. Static data structure occupies the same amount of memory every time a program is run. In other words, static data structure is a data structure that is defined and allocated before execution, which therefore can not change size during execution. A dynamic data structure, on the other hand, is one that can grow or shrink as needed to contain the data the system wants stored. That is, the present invention can allocate new storage when its needed and discard that storage when it is done with it (not every biller data has the same information and data; each biller will have a subset of all data and attributes accommodated by the common document model). Hence, use of the common document model by the present invention allows accommodation of all biller data types. In short, the dynamic data structure provided for by the use common document model allows the data structure of the invention of Claims 1, 21, 38, 40, 47, 49, 51, 62 and 71 to grow or shrink (i.e., dynamic data structure) while Remington et al. teaches a bill format with static data structure.

Furthermore, Applicants' invention is directed toward parsing incoming billing data to produce a common document model for processing. In contrast,

Remington et al. discloses that the biller computer generates a bill and remittance information according to a format created by the biller. In other words, Remington et al. is generating a bill while Applicants' invention is processing bills from a plurality of billers to transform the plurality of bill data types to a common document model wherein all biller data types are accepted. Thus, Applicants respectfully submit that the production of bills by a biller computer as disclosed by Remington et al. does not teach or suggest the conversion/transformation of biller data provided by a plurality of different billers with a plurality of data types (or fields).

Thus, as can be seen, Remington et al. do not teach or suggest the parsing functionality, the translator and the common document tree. The EBPP remittance system of Remington et al. merely provides a static data structure that is limited to one biller's customized format. Remington et al. do not "operate" on the biller data and do not parse the biller data into a common document tree with data and attributes mapped into nodes for a common model document.

With regard to independent Claim 40, Claim 40 further distinguishes over Schutzer and Remington et al. by reciting "a biller interface coupled to said database adapted to allow said plurality of billers to identify market segments of said bill payers according to market rules and information retrieved from said database." The Examiner cites Schutzer, *fig. 1-7, and column 14, line 26 to column 15, line 2* for Claim 40; however, the Schutzer drawings and text referred

to by the Examiner do not disclose a biller interface as recited in Claim 40. In fact, there is no mention of the billers being able to identify market segments of bill payers in the Schutzer patent. Remington et al. do not mention a biller interface as recited in Claim 40 either. The biller interface of Remington et al. allows billers to specify presentation and remittance information. Remington et al. do not disclose or suggest allowing the biller to identify market segments with the biller interface.

Turning now to independent Claim 47, Claim 47 further distinguishes over Schutzer and Remington et al. by reciting "an agent interface coupled to said database adapted to allow a plurality of agents having agency relationships with said plurality of billers to communicate with said bill payers regarding bills." Once again, the Examiner cites Schutzer, *figs. 1-7, column 14 line 26 to column 15, line 2*, which primarily disclose a bill service provider and not an agent interface as claimed. Remington et al. do not teach or suggest an "agent interface" either. Therefore, Applicants respectfully traverse the Examiner's assertion of anticipation as to an "agent interface" as recited in Claim 47..

With respect to independent Claim 49, Claim 49 further distinguishes over Schutzer by reciting "bill payer interactivity functionality adapted to detect and respond to communications from said bill payers by at least retrieving from said database information corresponding to said bill payers and presenting said information to said bill payers in a form requested by said bill payers; and biller

interactivity functionality adapted to detect and respond to communications from said plurality of billers by at least retrieving from said database information corresponding to said plurality of billers and presenting said information to said plurality of billers in a form requested by said plurality of billers." The Examiner again cites Schutzer, *figs. 1-7, and column 14, line 26 to column 15, line 2*, which discloses that the "bill can be sent or "pushed" when available or held and sent when requested, i.e., "pulled" (see Schutzer, column 14, lines 51-53). The reference, however, does not disclose that bills can be presented to bill payers in a form requested by the bill payers as claimed (emphasis added). In fact, Schutzer only "allows billers to personally customize and control the content and format of the bill presentment" (Schutzer, column 3, lines 8-9).

Moreover, Applicants stress the feature of Claim 49 which presents information to bill payers "in a form requested by said bill payers" which feature is not disclosed by Schutzer. As disclosed by Applicants, "customers can pay ... in a manner where each bill is presented to the customer in a way that is specially tailored to the customer with graphics, advertising, and other information that has been demographically proven to connect with that particular customer" (see Applicants' Specification, page 12, lines 13-16). Succinctly, the present invention allows both billers and payers to customize and control the presentation of bills whereas Schutzer only allows billers to customize bills. Therefore, Applicants respectfully traverse the Examiner's assertion of anticipation as to the

"interactivity functionality" element recited in Claim 49.

With regard to Remington et al., the biller interface of Remington et al. only allows the biller to customize the presentment while the customer customize the payment options. In contrast, Claim 49 allows both the biller and the customer to customize how bills are presented .

Claim 51 further distinguishes over Schutzer and Remington et al. by reciting "a modularized input processing engine, said input processing engine adapted to preprocess billing data from a plurality of billers corresponding to a plurality of data types." The advantage of using a modularized processing engine is that this facilitates scalability and expandability. For example, if a new form of biller data is encountered or must be dealt with for transformation into a form and format, the modularized input processing engine of Claim 51 allows for the processing of the new biller data in a modular way (see Applicants' Specification, page 25, lines 17-19). There may be separate engines for each new form of data so that the output of each preprocessing engine is ready for processing by a rule-based parsing engine. In other words, because the preprocessing of biller data is modularized, a new input processing engine can easily be integrated to handle new data types. Therefore, Claim 51 is believed to be patentable for the reasons given above.

Method Claim 62 further distinguishes over Schutzer and Remington et al. by reciting the step of "modularizing a preprocessing of billing data from a

plurality of billers corresponding to a plurality of data types." As previously discussed with respect to Claim 51, modularizing the preprocessing of biller data facilitates scalability and expandability without disrupting the present system configuration. Therefore, Claim 62 is believed to be patentable over Schutzer and Remington et al. for the reasons given above.

Independent Claim 71 distinguishes over Schutzer and Remington et al. by reciting a modularized input processing engine, in a manner similar to Claim 51. Therefore, Claim 71 is believed to be patentable over Schutzer and Remington et al. for the reasons given above.

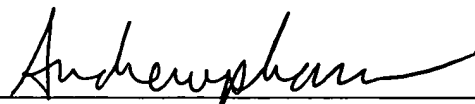
In view of the distinctions noted and the advantages attendant thereto, it is respectfully submitted that Schutzer and Remington et al., taken singly or combined, do not teach each and every aspect of the claimed invention of independent Claims 1, 21, 38, 40, 47, 49, 51, 62 and 71, either explicitly or impliedly.

Claims 2-11, 13 and 17, which are dependent upon Claim 1, are believed to be patentable with the parent Claim 1. Claims 22-34, which are dependent upon Claim 21, are believed to be patentable with the parent Claim 21. Claims 39, which is dependent upon Claim 38, is believed to be patentable with the parent Claim 38. Claims 41-43, which are dependent upon Claim 40, are believed to be patentable with the parent Claim 40. Claims 48, which is dependent upon Claim 47, is believed to be patentable with the parent Claim 47. Claims 50, which is

dependent upon Claim 49, is believed to be patentable with the parent Claim 49. Claims 52-55 and 57-60, which are dependent upon Claim 51, are believed to be patentable with the parent Claim 51. Claims 63-65, which are dependent upon Claim 62, are believed to be patentable with the parent Claim 62. Claims 72-81, which are dependent upon Claim 71, are believed to be patentable with the parent Claim 71.

In summary, Claims 1-11, 13, 17, 21-34, 38-43, 47-55, 57-60, 62-65 and 71-81 are believed to be allowable for the reasons given herein. Accordingly, these claims remain pending following entry of this Amendment, and are in condition for allowance at this time. As such, Applicants respectfully request entry of the present Amendment and reconsideration of the application, with an early and favorable decision being solicited. Should the Examiner believe that the prosecution of the application could be expedited, the Examiner is requested to call Applicants' undersigned representative at the number listed below.

Respectfully submitted,
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Page 40

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